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**FOR**

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**JEFFER, MANGELS, BUTLER & MARMARO LLP**

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## NON-SOAP BASED SHAVING AND MOISTURIZING COMPOSITION

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### Field of the Invention

10 The present invention relates generally to a method and composition for  
improving the shaving process. More particularly, the invention relates to a composition  
which allows for shaving with minimal use of water and minimal wait time for the  
softening of hair before shaving whereby the entire shaving process is made more  
efficient.

### Background of the Invention

15 Experience and testing have shown that the shaving process is not as  
efficient as it should be resulting in uncomfortable shaves, use of excess water, and  
general inconvenience in the shaving process. For example, for a comfortable shave, it is  
important that the hair fiber be softened as much as possible before the hair is cut. To  
20 achieve this, shaving is often performed while showering, adding up to six to ten minutes  
of additional time in which hot water is consumed, solely for the purpose of shaving.

The majority of persons who shave do so outside of the shower where applications  
of water and shaving preparations normally requires three to four minutes to fully hydrate  
and soften the hair, thereby giving the least resistance to cutting and giving the most  
25 comfortable shave. However, most shavers are not in the habit of waiting that long for  
hydration and typically begin shaving within a minute or less of applying the shaving

preparation. At the completion of the cutting stage of shaving, shavers must apply water to the shaved area to rinse off remaining shave preparation. This often results in water falling outside the sink, generally making the shaving process inconvenient.

Finally, using soap-based shaving compositions can leave the skin dry. Even if a humectant is used to prevent drying, repeated use over extended periods can lead to overdrying. Shavers, particularly men, are often not in the habit of applying moisturizing agents to the shaved area to cure the drying. While some type of aftershave is commonly used, an application of some type of moisturizer is often not taken for various reasons. One is that it simply adds more time to a process already viewed as too time consuming. Another is that such application of a "moisturizing cream" has not generally been widely promoted or marketed, and accepted, among male shavers.

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Summary of the Preferred Embodiments

5 The present invention comprises a soap-free shaving and moisturizing composition which maintains superior performance attributes while avoiding the harshness and drying associated with soap-based shave preparations. In one preferred embodiment of the present invention, the shaving and moisturizing composition comprises water, a water-based silicone lubricant, and sodium hyaluronate. In a much preferred embodiment, the composition includes a humectant, a conditioner, and allantoin in addition to water, a silicone lubricant and sodium hyaluronate. In another much preferred embodiment, the composition also includes preservatives and various heavy alkaloid extracts.

10 In another aspect of the present invention, a method of shaving is described. A shaving and moisturizing composition is applied to a dry or wet skin surface area. Hair on the surface area is cut using a razor blade immediately after the composition is applied to the surface area. Once shaving is complete, residual shaving composition on the surface area is manually rubbed into the surface area without the need for applying additional liquid to the surface area, although water or other liquids, such as after-shave, can be applied. The compositions of the present thus perform as an after-shave and a long-term moisturizer.

15 In another aspect of the invention, a method of shaving using a multiple blade razor is described. After hydrating the shave area, such as after showering, the shave area is dried and the shaving composition of the present invention is applied. A multiple blade razor having an open flow design is used to shave immediately after the shaving composition is applied. The open flow design of the razor blade and the properties of the

shaving composition requires that reduced amount of water is needed to rinse the razor thereby extending the useful life of the razor blade.

### Detailed Description of the Preferred Embodiments

Reference will now be made in detail to preferred embodiments of the invention. While the invention will be described in conjunction with its preferred embodiments, it will be understood that it is not intended to limit the invention to one preferred embodiment. To the contrary, the invention is intended to cover alternatives, modifications, and equivalents as may be included within the spirit and scope of the invention as defined by the appended claims.

The present invention is a single shaving composition that performs as a shave cream, an after-shave, and a moisturizer. Applying the composition does not require the application of water, however water can be applied on the shave area if desired by the shaver. Water need not be added to the shaving composition itself, which is primarily water based. A significantly reduced amount of water is needed to rinse or flush the shave composition and hair from one's razor blades compared to the amount of water typically needed with conventional shave compositions. In addition, use of the shaving composition does not require a significant hydration wait time between applying the composition and shaving. Shaving can begin seconds after the composition is applied to the shave area. Once shaving is complete, any residual composition on the shaved area can be rubbed into the skin thereby acting as an after-shave and a long-term moisturizer.

Components of a preferred embodiment of the present invention include deionized water, a humectant, to improve soothing of the skin, a water-based silicon lubricant and

sodium hyaluronate, a derivative of hyaluronic acid. It should be appreciated that other salts of hyaluronic acid can also be used provided they are compatible with the other ingredients of the composition. In one preferred embodiment, the shaving composition contains, in percent by weight, (a) about 70 to 95 % deionized water, about 2 to 10 % of a humectant, such as butylene glycol, glycerin, sorbitol, propylene glycol, glycereth-7, glycereth-12, glycereth-26, glycereth-31, methyl gluceth-10, methyl gluceth-20, PEG-4, polyamino sugar condensate, polyquaternium-7, polyquaternium-22, polyquaternium-39, polyquaternium-47, PCA, sodium PCA, and UREA, or mixtures thereof, (b) about .25 to 5 % of a water-based silicone lubricant, such as PEG8 dimethicone, dimethicone copolyol, cyclomethicone, BIS-PEG/PPG-20/20 dimethicone, PEG/PPG-20/6 dimethicone, PEG-14 dimethicone, glyceryl polymethacrylate, hydrogenated vegetable oil, jojoba esters, mineral oil, octyl palmitate, petrolatum, and shea butter or mixtures thereof, or about .5 to 10% of a non-water based lubricant such as polytetrafluoroethylene (PTFE), also known as Teflon®, for example, the micro BB version of PTFE or a liquid version having a lower molecular weight, (c) about .01 to 5 % sodium hyalurononate or equivalent salts of hyaluronic acid, (d) about .05 to .5 % of a conditioner, for making the hair shaft softer, such as panthenol, behentrimonium chloride, ceramide 2, cetrimonium chloride, hydrolyzed animal protein, hydrolyzed collagen, hydrolyzed keratin, hydrolyzed soy protein, hydrolyzed wheat protein, keratin amino acids, laurtrimonium chloride, niacin, niacinimide, phytantriol, polyquaternium-4, polyquaternium-6, polyquaternium-7, polyquaternium-10, polyquaternium-11, and polyquaternium-22, or mixtures thereof, (e) about .1 to 1 % preservatives to reduce bacteria in the shaved area, such as chlorphenesin, phenonip, benzalkonium chloride, benzethonium chloride, benzoic acid, benzyl alcohol, benzylparaben, butylparaben, chloroxylonol, diazolidinyl urea, dimethyl oxazolidine, and disodium EDTA, or

mixtures thereof, and (f) about .05 to .5 % allantoin. The foregoing composition functions as a shave cream, after shave and moisturizer. The composition is substantially free of soap and may be used without applying water to the shave area or to the composition (with the exception of rinsing the razor blade during the shave).

More preferably the composition will comprise about 75 to 90 % deionized water, about 3 to 7 % butylene glycol as a humectant, about 1 to 3 % PEG8 dimethicone as a water-based silicone lubricant or about 2 to 7% PTFE as a non-water based lubricant, about .01 to .05 % sodium hyaluronate, about .05 to .10 % panthenol, about .05 to .10 % chlorphensin, about .1 to .4 % phenonip, about 3 to 5 % Canadian Willow Herb Extract, about .001 to .01 % licorice extract, and about .0001 to .001 % olive leaf extract. These alkaloid-heavy extracts collectively perform anti-bleeding and anti-acne functions and more generally function as soothers.

A most preferred shaving composition will have about 70 to 86 % deionized water, about 5 to 8 % butylene glycol, about 2 to 4 % PEG8 dimethicone or about 3 to 6% PTFE, about .10 to 1.0 % sodium hyaluronate, about .2 to .5 % panthenol, about .10 to .20 % chlorphensin, about .5 to 1.0 % phenonip, about 1 to 5 % Canadian Willow Herb Extract, about .1 to 1.0 % licorice extract, and about .05 to .10 % olive leaf extract.

A key component to a comfortable shave is hydration of the skin and hair shaft. This can be achieved through the hydroscopic properties of sodium hyaluronate acid that holds water on the skin and draws moisture from air in contact with the surface of the skin. Within one to two minutes and preferably one to 60 seconds after application, the skin is typically hydrated sufficiently to comfortably shave. Sodium hyaluronate allows the skin to be replenished with moisture at a cellular level. It is a copolymer which provides lubricity and performs as a long-term moisturizer. The hydroscopic properties of sodium

hyaluronate allow the retention of water and attracts water from the atmosphere to replenish the skin. Polymers of acetylglycosamine and glucuronic acid have similar properties and can be used to achieve hydration of the skin and perform as long-term moisturizers. Sodium hyaluronate, typically made from bacteria and yeast cultures, is available from Genzyme of Massachusetts.

Given that water need not be applied to the skin, traditional conditioners that need to be rinsed off, such as steric acid or palometic acid, are not used.

The following examples illustrate representative shaving and moisturizing compositions of the present invention. All parts and percentages are by weight.

Ingredient (wt% )	Examples			
	1(wt% )	2(wt% )	3(wt% )	4(wt% )
Dionized Water	87.379	80	95.0979	97.8897
Butylene Glycol	5.0	8.0	3.0	1.0
PEG8 Dimethcone	2.0	4.0	1.0	.5
Sodium Hyaluronate	.10	1.0	.05	.01
Panthenol	.20	.5	.1	.05
Chlorphensin	.20	.2	.15	.1
Phenonip	.60	.6	.5	.4
Allantoin	.20	.5	.1	.05
Canadian Willow Herb Extract	.01	5.0	.001	.0001
Licorice Extract	.01	.1	.0001	.0001
Olive Leaf Extract	.001	.1	.0001	.0001

Other useful additives which may be utilized in the composition include skin freshening and soothing agents such as menthol, aloe, and collagen. The shaving and moisturizing composition of the present invention may be packaged in any dispenser suitable for dispensing post-foaming shave gels. These include aerosol containers with a barrier, such as a collapsible bag or piston, to separate the gel from the propellant required for expulsion, collapsible tubes, and pump or squeeze containers. Another useful additive is sunblock.

The shaving composition of the present invention can be used to shave in various ways. As mentioned above, shaving products are more effective when the hair has been



softened or soaked by a shaving composition for typically a minimum of three minutes. However, individuals, particularly men, often do not wait this long before shaving, thus do not begin cutting the hair at the optimal time. In a preferred embodiment, the shaving composition of the present invention is applied on dry skin immediately or soon after showering or hydrating the shave area, such as being in a sauna, steam room or after swimming. In the case of showering, hydration of a shave area, such a man's face, lasts several minutes after completion of the shower. Thus, once the shaving composition is applied, the person shaving does not have to wait for a hydration period (e.g., three minutes) but can begin shaving immediately and yet have an optimal shave.

Moreover, the shaver does not have to re-apply water to the shave area before using the shaving composition. By not having to apply water to the shave area for re-wetting the face before shaving and washing the shave area with water after shaving is complete, much of the inconvenience of spilling water outside the sink or onto other parts of the body is eliminated. Additionally, given the cream-like texture of the shave composition rather than the conventional foam or gel-to-foam texture of most shaving compositions, the inconvenience of having to applying, rinse and wash off excess foam is eliminated. As described above, any residual shaving composition on the skin after shaving is rubbed into the skin thereby reducing dryness from soap or foams.

By applying the shaving composition containing sodium hyaluronate and a silicone lubricant, as described in detail above, onto the shave area, resistance to cutting the hair is reduced. By reducing the resistance, the "drag" encountered by shavers is similarly reduced which, in turn, results in fewer strokes of the razor blade and less irritation on the skin. In a preferred embodiment, the shaving composition is used in combination with a multiple blade razor having an "open flow" blade design. One example of such a razor is

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